

Legend **Land Status** Key Observation Point Bureau of Land Management Proposed Route Bureau of Reclamation Proposed Route (DC Fish and Wildlife Service 500/138-kV) Feasible Alternative Alternatives Approved in State Wildlife, Parks and Recreation, or Other 2014 ROD 2013 FEIS Alternatives Transmission Line (138-kV or greater) Nat'l Historic and Study Trails 5 Mile Distance Buffer

Photograph Information

Time of photograph: 9:51 AM

Date of photograph: 4-27-15

Weather condition: Clear

Viewing direction: Southwest

Latitude: 43° 14' 20.295" N

Longitude: 116° 32' 13.905" W

Nearest tower: 400 feet Farthest tower: 2,040 feet

Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



Existing Conditions from TKey Observation Point C1514 Alternative 9G/9H

Gateway West 500kV Transmission Project Idaho

June 2015

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Figure D-8a



Legend **Land Status** Key Observation Point Bureau of Land Management Proposed Route Bureau of Reclamation Proposed Route (DC Fish and Wildlife Service 500/138-kV) Feasible Alternative Alternatives Approved in State Wildlife, Parks and Recreation, or Other 2014 ROD 2013 FEIS Alternatives Transmission Line (138-kV or greater) Nat'l Historic and Study Trails 5 Mile Distance Buffer

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Photographic Simulation from Key Observation Point C1514 Alternative 9G/9H

Gateway West 500kV Transmission Project Idaho

June 2015

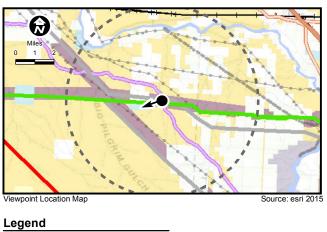
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Figure D-8b



Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.





Land Status Key Observation Point Bureau of Land Management Proposed Route Bureau of Reclamation Proposed Route (DC 500/138-kV) Feasible Alternative National Park Service Private Alternatives Approved in State Wildlife, Parks and Recreation, or Other 2014 ROD 2013 FEIS Alternatives Transmission Line (138-kV or greater) Nat'l Historic and Study

Photograph Information

Trails

Time of photograph: 12:39 PM Date of photograph: 4-30-15 Weather condition: Partly Cloudy Viewing direction: Southwest

Latitude: 42° 51' 30.322" N 115° 4' 25.446" W Longitude:

Nearest tower: N/A N/A Farthest tower:

Existing Conditions from Key Observation Point C1515

Gateway West 500kV Transmission Project Idaho

June 2015

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Figure D-9a



Transmission Line (138-kV or greater) Nat'l Historic and Study Trails 5 Mile Distance Buffer **Photograph Information** Time of photograph: 12:39 PM Date of photograph: 4-30-15 Weather condition: Partly Cloudy

Key Observation Point

Proposed Route (DC 500/138-kV)

Feasible Alternative Alternatives Approved in

2014 ROD

Land Status

Bureau of Land Management

National Park Service Private

Bureau of Reclamation

State Wildlife, Parks and Recreation, or Other

42° 51' 30.322" N Latitude: 115° 4' 25.446" W Longitude:

Southwest

Nearest tower: N/A N/A Farthest tower:

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Photographic Simulation from Key Observation Point C1515 Alternative 9B

Gateway West 500kV Transmission Project Idaho

June 2015

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Figure D-9b



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Legend **Land Status Key Observation Point** Bureau of Land Management Proposed Route Bureau of Reclamation Proposed Route (DC 500/138-kV)

Feasible Alternative Forest Service Private State Alternatives Approved in 2014 ROD 2013 FEIS Alternatives Transmission Line (138-kV or greater) Nat'l Historic and Study Trails 5 Mile Distance Buffer **Photograph Information** Time of photograph: 11:07 AM Date of photograph: 4-28-15 Weather condition: Clear Viewing direction: Southwest 43° 15' 4.333" N Latitude:

Existing Conditions from Key Observation Point C1519 Segment 8 Proposed

115° 40' 35.776" W

N/A N/A

Gateway West 500kV Transmission Project Idaho

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Figure D-10a



Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



Legend **Land Status Key Observation Point** Bureau of Land Management Proposed Route Bureau of Reclamation Proposed Route (DC 500/138-kV) Forest Service Private Feasible Alternative State Alternatives Approved in 2014 ROD 2013 FEIS Alternatives Transmission Line (138-kV or greater) Nat'l Historic and Study 5 Mile Distance Buffer **Photograph Information** Time of photograph: 11:07 AM Date of photograph: 4-28-15 Weather condition: Clear Viewing direction: Southwest 43° 15' 4.333" N Latitude: 115° 40' 35.776" W Longitude:

Photographic Simulation from Key Observation Point C1519 Segment 8 Proposed

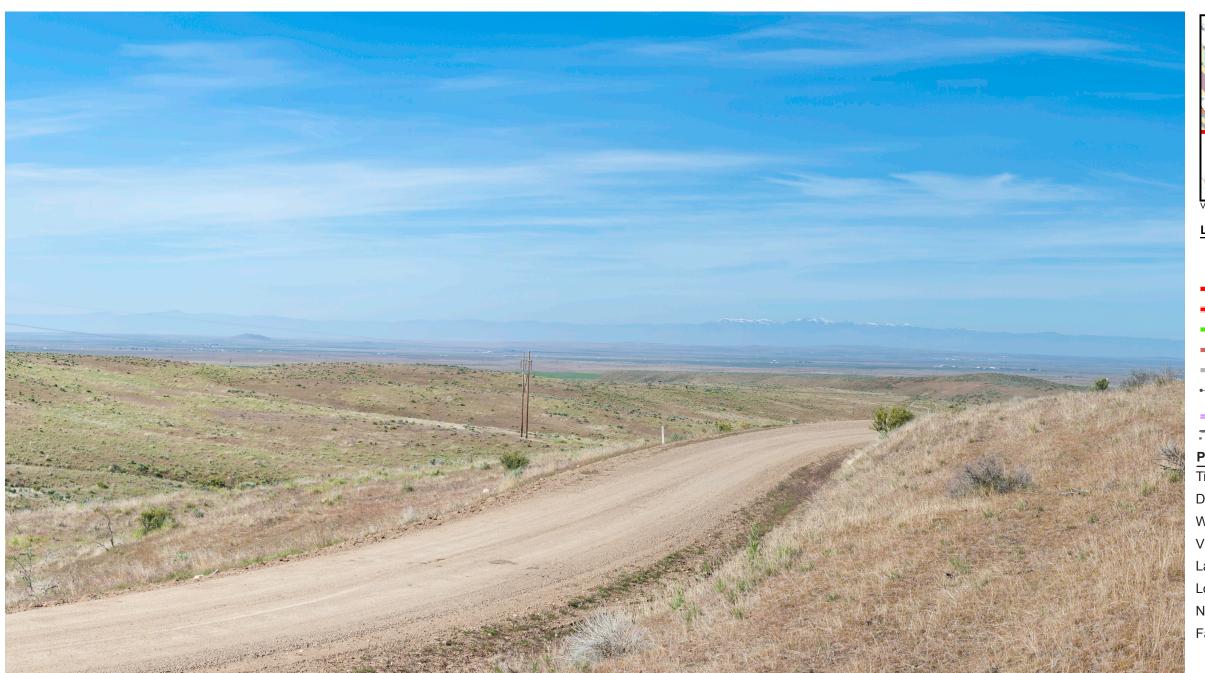
2.48 miles7.5 miles

Gateway West 500kV Transmission Project Idaho

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Figure D-10b



Legend **Land Status** Key Observation Point Bureau of Land Management Proposed Route Bureau of Reclamation Proposed Route (DC 500/138-kV)
Feasible Alternative Forest Service Private Alternatives Approved in 2014 ROD State Wildlife, Parks and Recreation, or Other 2013 FEIS Alternatives Transmission Line (138-kV or greater) Nat'l Historic and Study Trails 5 Mile Distance Buffer **Photograph Information** Time of photograph: 9:32 AM Date of photograph: 4-28-15

Time of photograph: 9:32 AM

Date of photograph: 4-28-15

Weather condition: Clear

Viewing direction: Southwest

Latitude: 43° 23′ 24.224″ N

Longitude: 115° 49' 53.085" W

Nearest tower: N/A
Farthest tower: N/A

Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



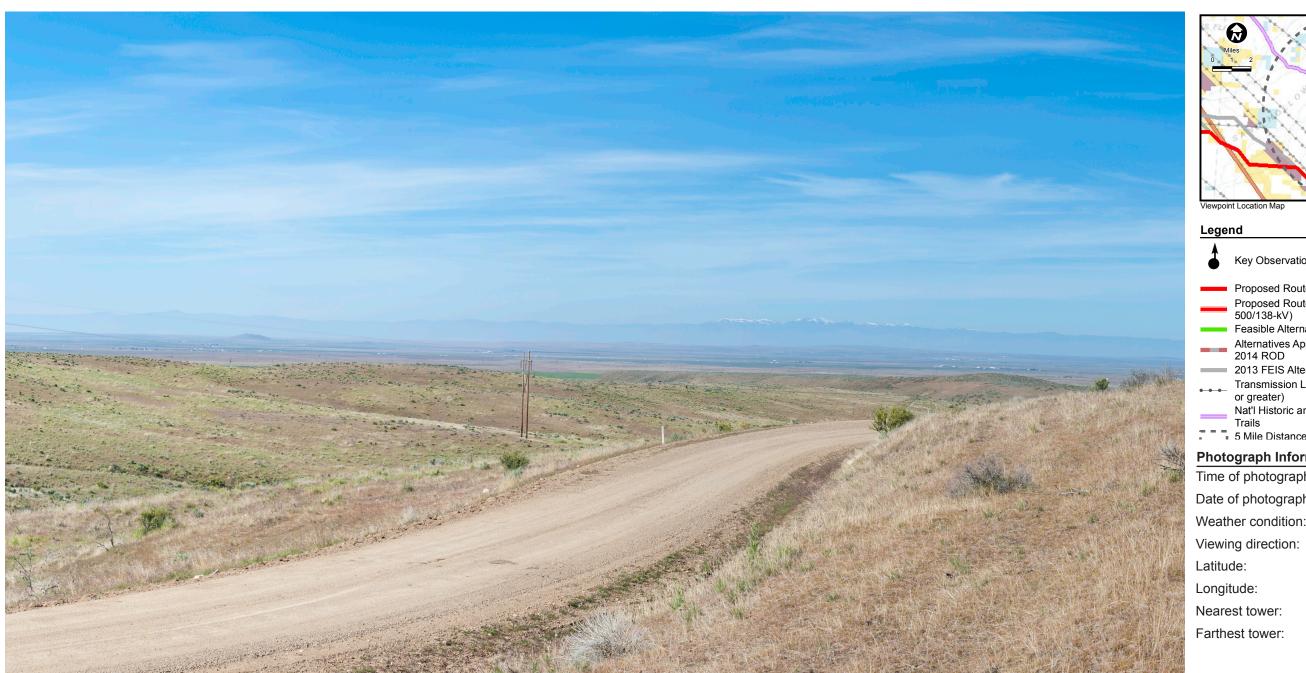
Existing Conditions from Key Observation Point C1521 Alternative 8C

Gateway West 500kV Transmission Project Idaho

June 2015

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Figure D-11a



Legend **Land Status** Key Observation Point Bureau of Land Management Proposed Route Bureau of Reclamation Proposed Route (DC 500/138-kV) Forest Service Private Feasible Alternative Alternatives Approved in State Wildlife, Parks and Recreation, or Other 2014 ROD 2013 FEIS Alternatives Transmission Line (138-kV or greater) Nat'l Historic and Study Trails 5 Mile Distance Buffer **Photograph Information** Time of photograph: 9:32 AM Date of photograph: 4-28-15 Weather condition: Clear Southwest



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Photographic Simulation from Key Observation Point C1521 Alternative 8C

43° 23' 24.224" N

115° 49' 53.085" W

4.6 miles 8.9 miles

Gateway West 500kV Transmission Project Idaho

June 2015

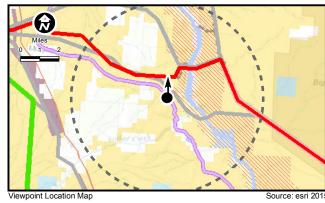
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Figure D-11b



Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.





Legend **Land Status Key Observation Point** Bureau of Land Management Proposed Route Bureau of Reclamation Proposed Route (DC 500/138-kV) Feasible Alternative Private State Alternatives Approved in 2014 ROD 2013 FEIS Alternatives Transmission Line (138-kV or greater) Nat'l Historic and Study Trails 5 Mile Distance Buffer **Photograph Information**

Time of photograph: 9:56 AM

Date of photograph: 5-2-15

Weather condition: Clear

Viewing direction: Northeast

Latitude: 43° 11' 24.322" N

Longitude: 116° 24' 19.570" W

Existing Conditions from Key Observation Point C1527

Gateway West 500kV Transmission Project Idaho

June 2015

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Figure D-12a



Viewpoint Location Map

Source: esri 201

Land Status

Key Observation Point

Legend

Key Observation Point

Proposed Route
Proposed Route (DC
500/138-kV)
Feasible Alternative
Alternatives Approved in
2014 ROD
2013 FEIS Alternatives
Transmission Line (138-kV or greater)
Nat'l Historic and Study
Trails
5 Mile Distance Buffer

Photograph Information

Time of photograph: 9:56 AM

Date of photograph: 5-2-15 Weather condition: Clear

Viewing direction: Northeast

Latitude: 43° 11' 24.322" N Longitude: 116° 24' 19.570" W

Nearest tower: 1.12 miles Farthest tower: 1.8 miles

Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



Photographic Simulation from Key Observation Point C1527 Alternative 9

Gateway West 500kV Transmission Project Idaho

June 2015

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Figure D-12b



Viewpoint Location Map

Source: esri 201

Legend **Land Status Key Observation Point** Bureau of Land Management Proposed Route Bureau of Reclamation Proposed Route (DC 500/138-kV) State Feasible Alternative Alternatives Approved in 2014 ROD 2013 FEIS Alternatives Transmission Line (138-kV or greater) Nat'l Historic and Study Trails 5 Mile Distance Buffer **Photograph Information** Time of photograph: 9:56 AM

Date of photograph: 5-2-15
Weather condition: Clear
Viewing direction: Norther

iewing direction: Northeast

Latitude: 43° 11' 24.322" N Longitude: 116° 24' 19.570" W

Nearest tower: 0.4 mile Farthest tower: 0.8 mile

Photograph above is intended to be viewed 12" from viewer's eyes when printed on 11" x 17" paper. The photograph below was cropped, top and bottom, to show a wide-angle view of the area; the area in yellow depicts the location of the above imagery.



Photographic Simulation from Key Oberservaion Point C1527 Alternative 9G/9H

Gateway West 500kV Transmission Project Idaho

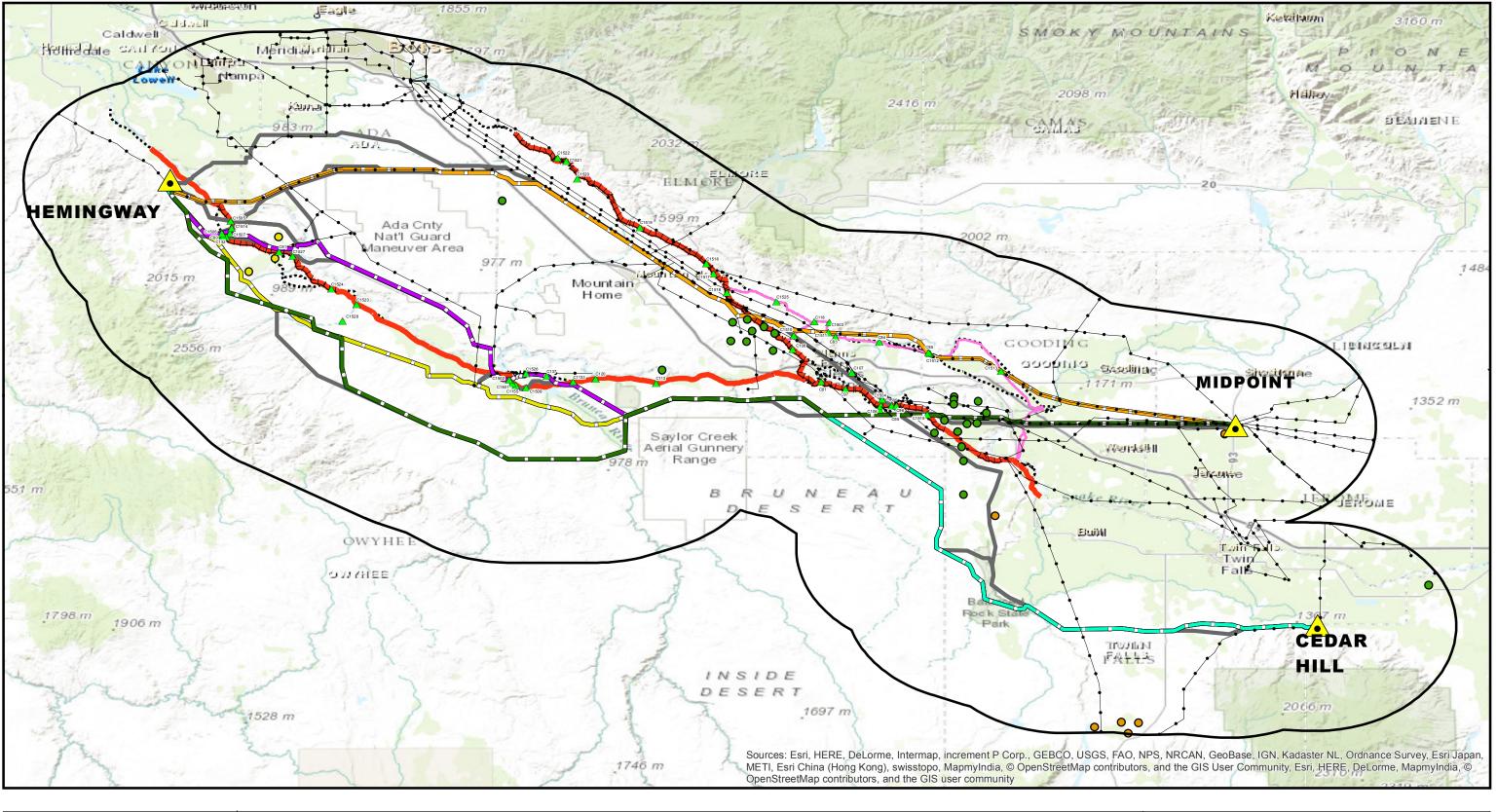
June 2015

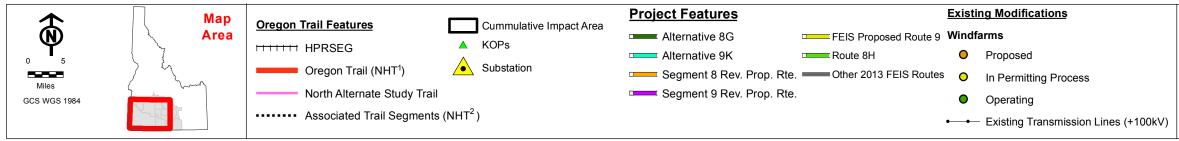
DRAFT

Figuree D-12c

BLM Manual 6280 Inventor	and Impacts Anal	lysis for National	Historic Trail	Is and Study 7	Frails

Attachment E Cumulative Impacts Maps



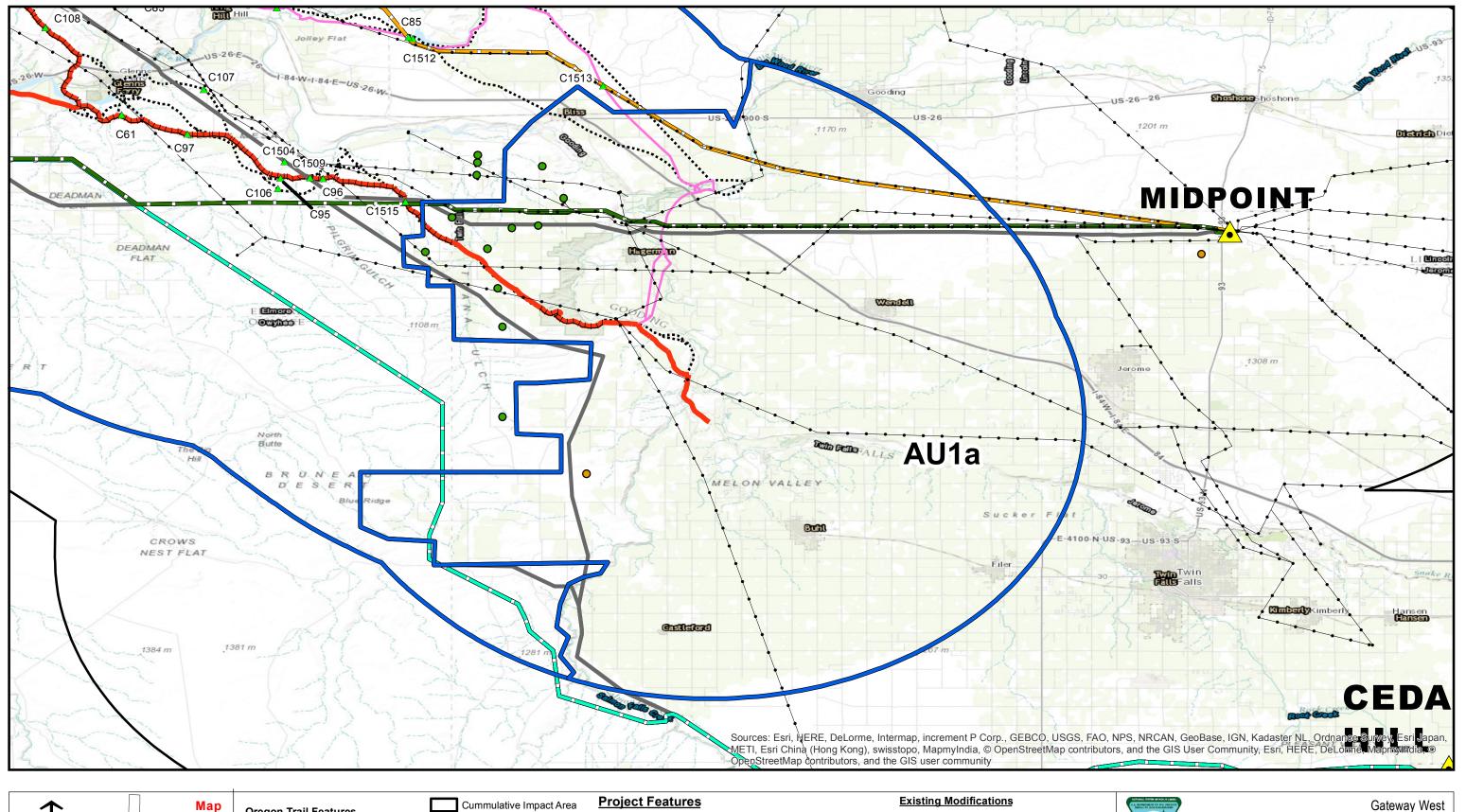


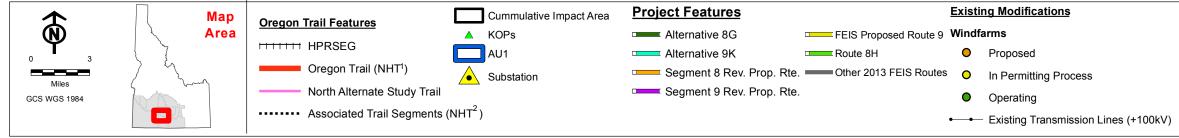


Gateway West Transmission Line Project Draft Supplemental EIS

Cumulative Impacts Map Overview OR TR. Feats., Proj. Feats., and Existing Mods.

Figure E-1



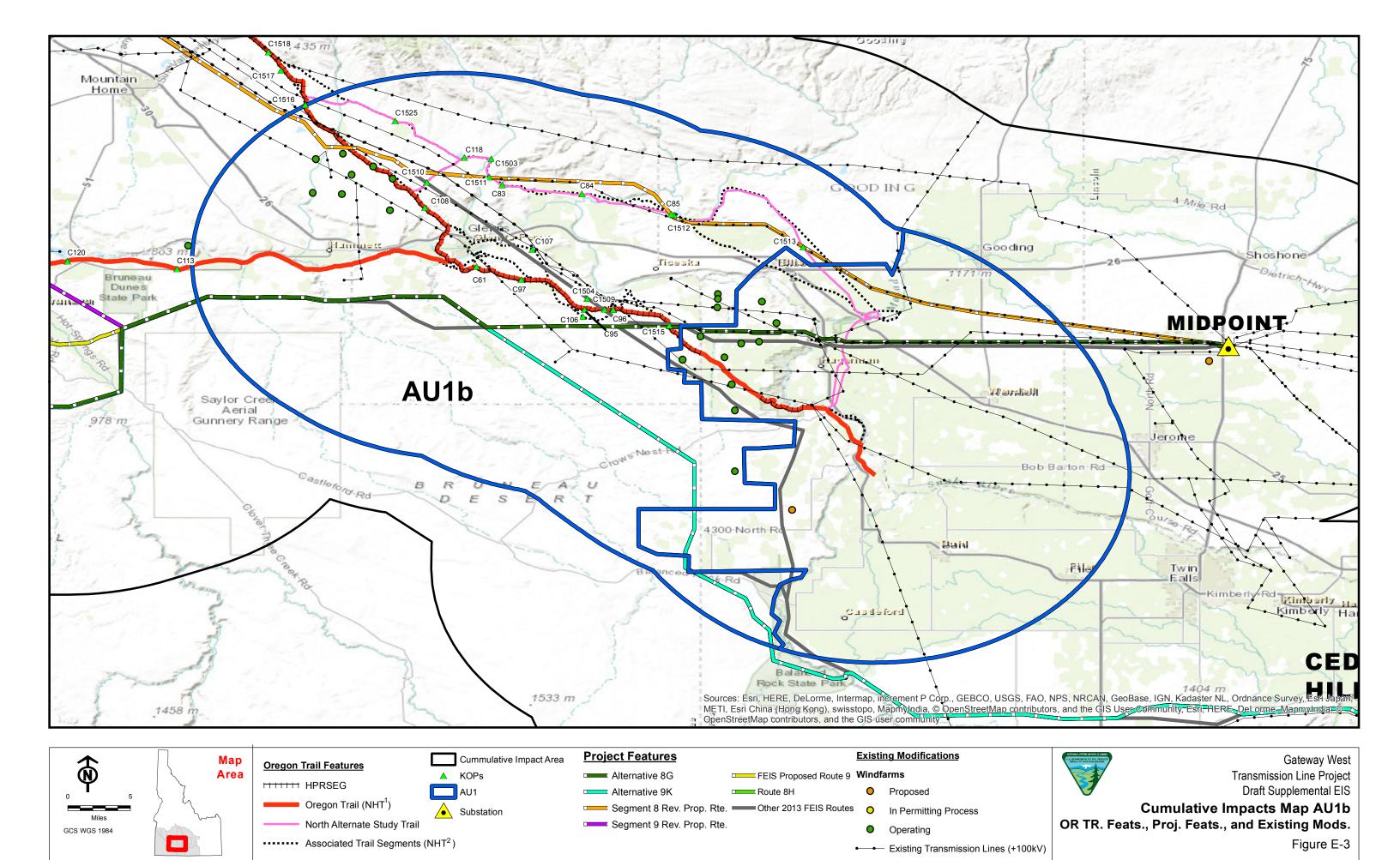


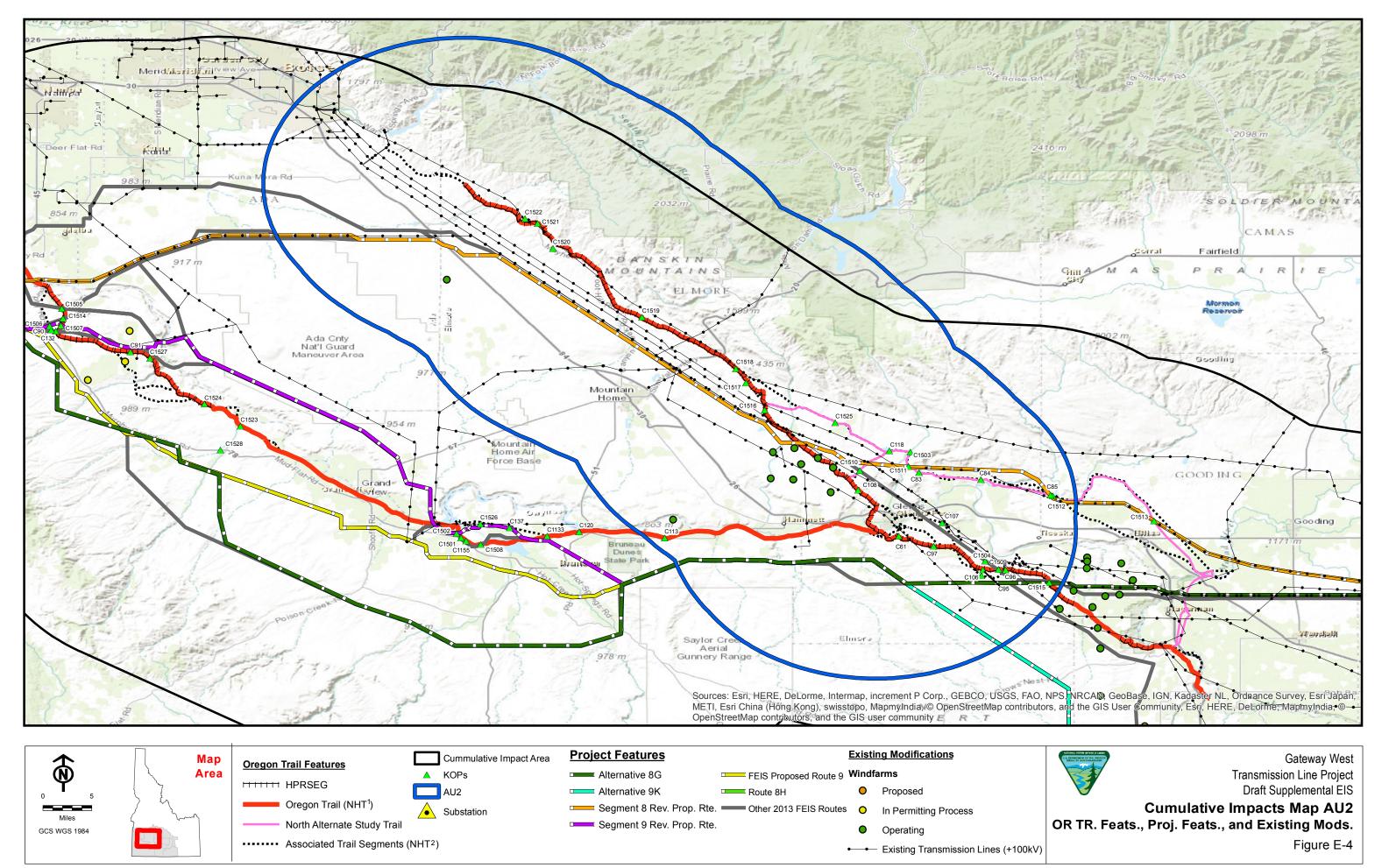


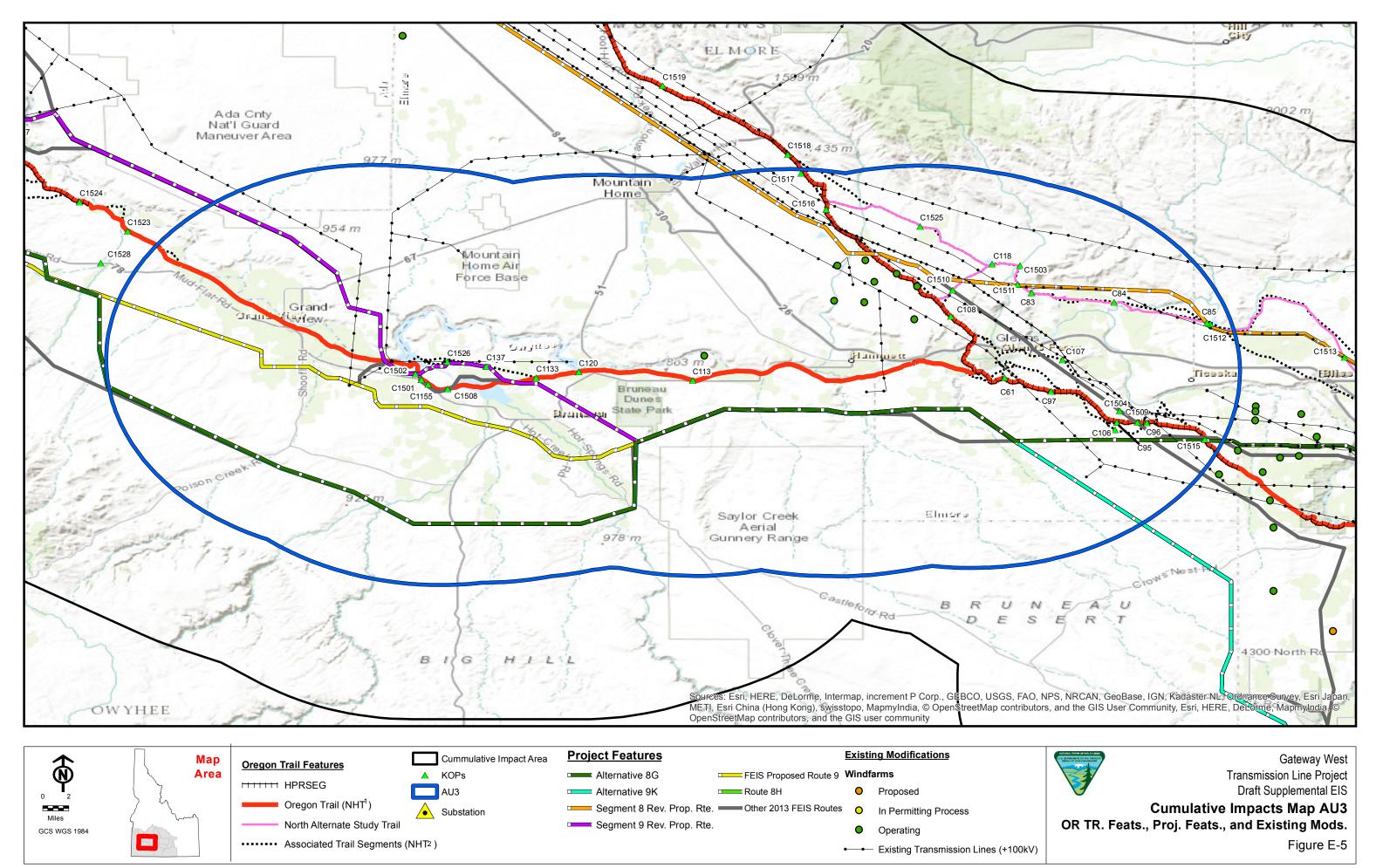
Gateway West Transmission Line Project Draft Supplemental EIS

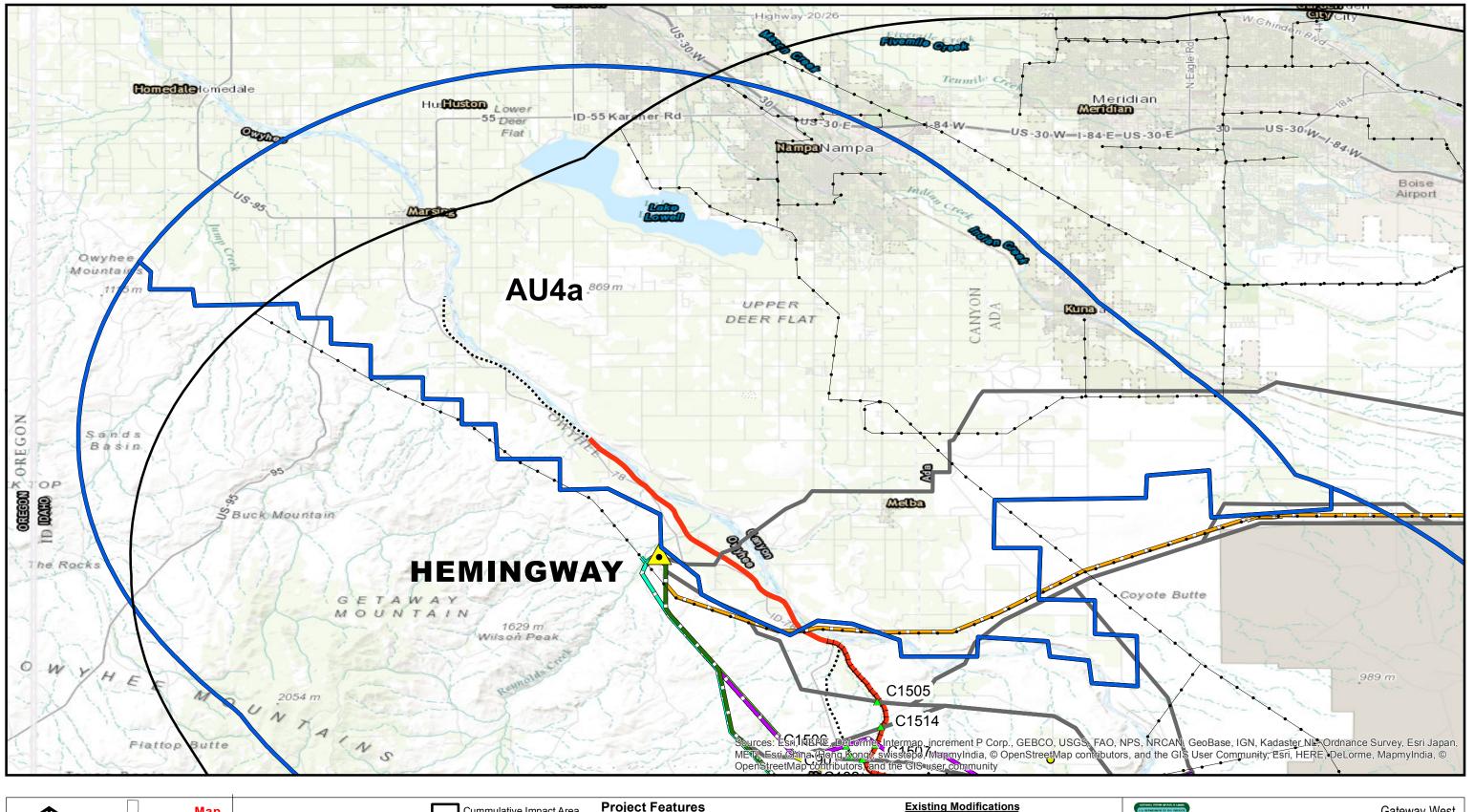
Cumulative Impacts Map AU1a OR TR. Feats., Proj. Feats., and Existing Mods.

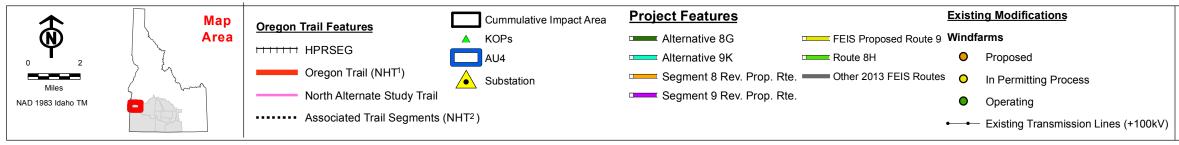
Figure E-2









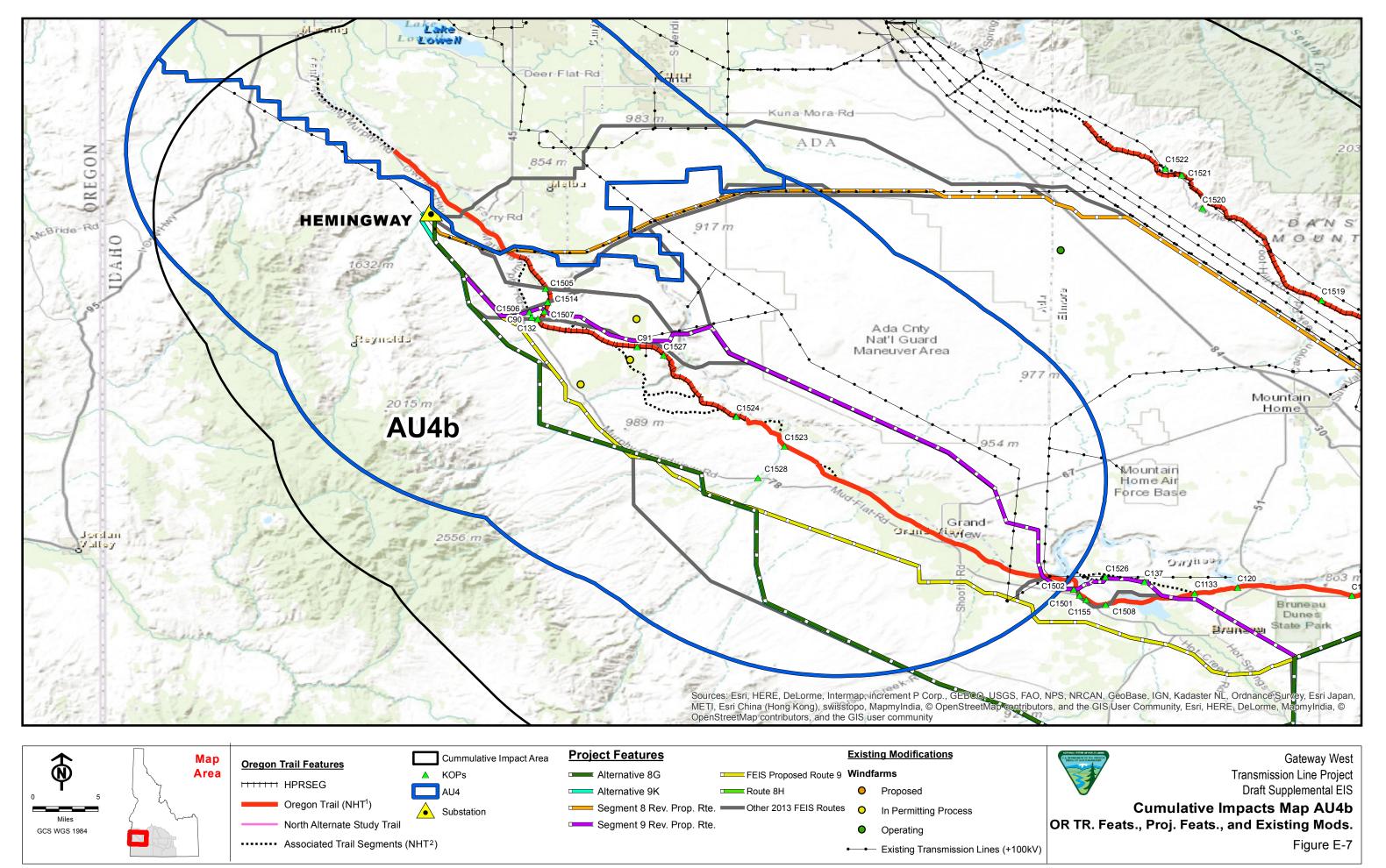


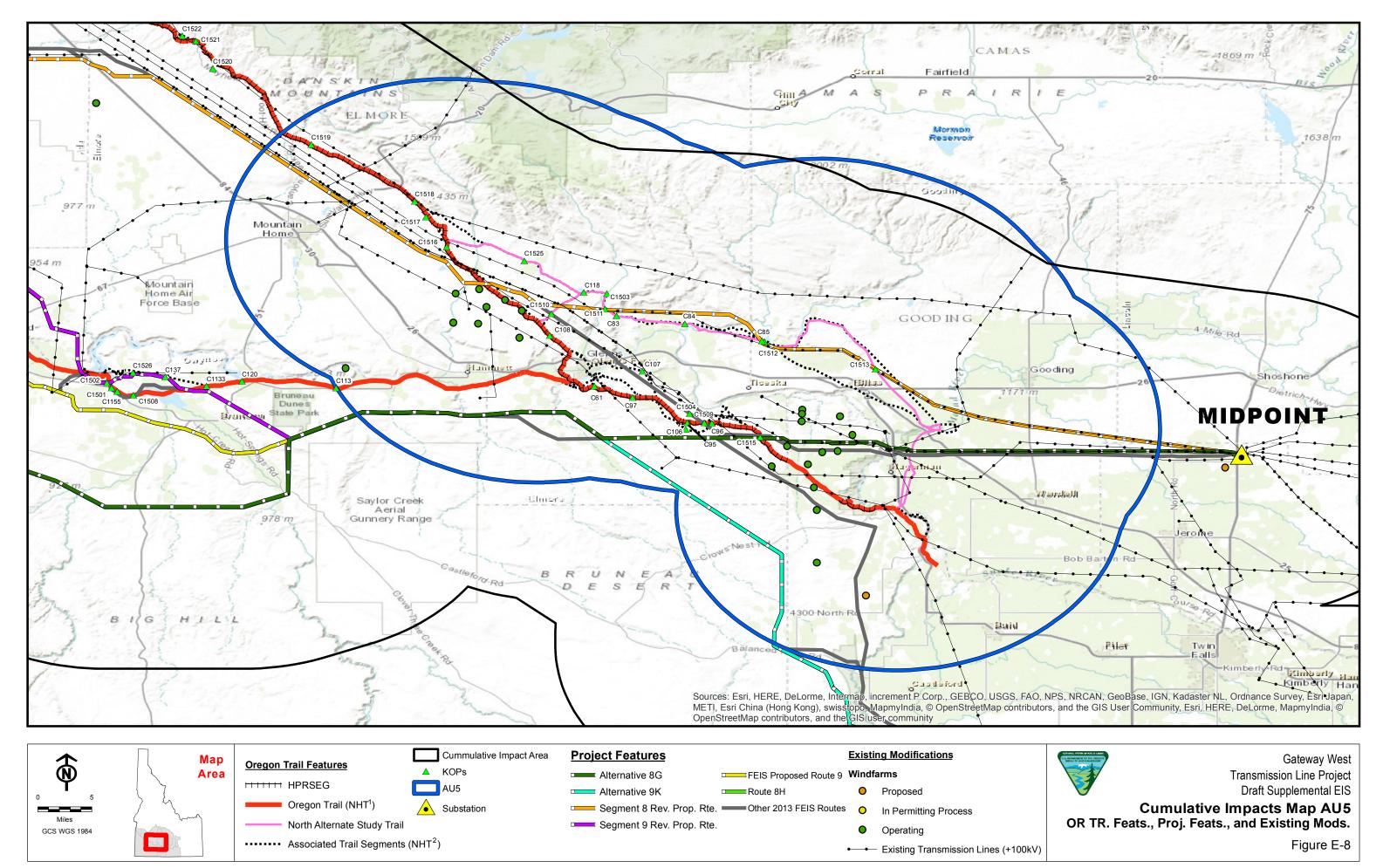


Gateway West Transmission Line Project Draft Supplemental EIS

Cumulative Impacts Map AU4a OR TR. Feats., Proj. Feats., and Existing Mods.

Figure E-6





BLM Manual 6280 Inventory	and Impacts Analysis	for National Histori	ic Trails and Stud	v Trails

Attachment F IOP-KOP Impacts Table

National Historic Trail IOP-KOP Impacts Table

IOP/ KOP	Site Name	BLM Field Office	Site Type	Distance from IOP/KOP to Existing Cultural Modifications (Other Landscape Elements)	VRI Class/ VRM Class	Within SRBOP (Y/N)	Project Route Segment	Distance from IOP/ KOP to VISIBLE Project Segment	Visual Contrast Rating	Impact – Scenic/ Visual	Impact – Cultural/ Historic	Impact - Recreation	Impact – Natural	Recom- mended EPMs and Mitigation
Analysis			T		T				T -		1	1.	1	
C1515	OT Crossing- Route 8G	Jarbidge	Visual; Cultural	Wind farm 2 mi. S and SE; Transmission line	VRI II VRM 1	N	Route 8G/ Route 8H (overlap)	0.1 mi. S	Strong	Moderate	Adverse	Low	None	Y
				0.8 mi. E and 1.3 mi. SW.			Route 8A (FEIS)	0.1 mi. N	Strong	Moderate	Adverse	Low	None	Y
							Route 9B (FEIS)	2 mi. SW	Weak	Low	Adverse (Skylines)	Low	None	Y
C96	Oregon NHT (a portion	Jarbidge	Visual; Cultural	10 Wind farms avg. 7 mi. SE.	VRI II VRM 1	N	Route 8A (FEIS)	1.5 mi.SE	Weak	Low	Adverse	Moderate	None	Y
	coincides with Kelton Road)			Transmission lines 0.5 mi. E, 1 mi.NE and 1 mi. E			Route 8G/ Route 8H (overlap)	2 mi. SE	Weak	Low	No Adverse Impact	Low	None	N
							Route 9B (FEIS)	3.45 mi. SW	Weak	Low	No Adverse Impact	Low	None	N
C106	Oregon NHT Trail Marker, near Bell Rapids Road	Jarbidge	Visual; Cultural; Historic Property	Transmission lines 1.9 mi. NE; Wind farm 5 mi. E on horizon.	VRI II VRM 1	N	Route 9B (FEIS)/ Route 8G/ Route 8H (overlap)	0.8 mi. S	Strong	Moderate	Adverse	Low	None	Y
							Route 8A (FEIS)	1.9 mi. NE	Moderate	Low	No Adverse Impact	Low	None	N
							FEIS Prop. Rote 9/ Rev. Prop. Route 9/ Route 9K (overlap)	4.5 mi. SW	Weak	Low	No Adverse Impact	Low	None	N
C95	Oregon NHT (West Deer	Jarbidge	Visual; Cultural;	Fence, petroleum pipelines, wind farm,	VRI II VRM 1	N	Route 8A (FEIS)	0.8 mi. NE	Moderate	Low	Adverse	Moderate	None	Y
	Creek Gulch)		Historic Property	existing transmission line			Route 8G/ Route 8H/ Route 9B (FEIS) (overlap)	1.4 mi. S	Moderate	Low	Adverse	Moderate	None	Y

IOP/ KOP	Site Name	BLM Field Office	Site Type	Distance from IOP/KOP to Existing Cultural Modifications (Other Landscape Elements)	VRI Class/ VRM Class	Within SRBOP (Y/N)	Project Route Segment	Distance from IOP/ KOP to VISIBLE Project Segment	Visual Contrast Rating	Impact – Scenic/ Visual	Impact – Cultural/ Historic	Impact - Recreation	Impact – Natural	Recom- mended EPMs and Mitigation
C1509	OT Crossing-	Jarbidge	Cultural	Wind farms 6 mi. SE and 12 mi. W;	VRI II VRM	N	Route 8A (FEIS)	crossing	Strong	Moderat e	Adverse	Moderate	None	Y
	Route 8A			Transmission lines 0.6 mi. NE.	1		Route 8H	1.4 mi. S	Moderate/ No Change	Low	Adverse	Moderate	None	Y
C1504	380-1 Alternate	Jarbidge	Cultural	Wind farms 7 mi. E and SE, and 14 mi.	VRI II VRM 4	N	Route 8A (FEIS)	crossing	Moderate	Low	Adverse	Low	None	Y
	Route OT			NW; Transmission lines 0.6 mi. NE.			Route 9B (FEIS) / Route 8G/ Route 8H (overlap)	2.2 mi. S	Moderate	Low	No Adverse Impact	Low	None	N
C97	Oregon NHT (Rosevear Gulch area)	Jarbidge	Visual; Cultural; Historic	Transmission line 2 mi. NE.	VRI II VRM 1	N	Route 8A (FEIS)	1.63 mile NE	Weak	Low	No Adverse Impact	Low	None	N
			Property				Route 8G/ Route 8H (overlap)	3.8 miles S	Weak	Low	No Adverse Impact	Low	None	N
							FEIS Prop. Route 9/ Rev. Prop. Route 9 / Routes 9K/9B (overlap)	4.3 miles SW	Weak	Low	No Adverse Impact	Low	None	N
C107	Kelton Road Marker	Jarbidge	Cultural	Wind farms 9 mi. NW; Transmission lines 0.2 mi. NE; Communication tower 2 mi. S; 3 Cellular towers 1 mi. N and NE.	VRI III VRM 1	N	Route 8A (FEIS)	0.6 mi. SW	Strong	Moderate	Adverse	Low	None	Y
C61	Oregon NHT (SE of Three Island Crossing)	Jarbidge	Visual; Cultural (contri- buting); Recreation (ATR)	Transmission lines 0.3 and 0.5 mi. NE.	VRI III VRM 1	N	Route 8G/ Route 8H/ FEIS Prop. Route 9/ Rev. Prop. Route 9 / Route 9K (overlap)	3.2 mi. SW	Weak	Low	No Adverse Impact	Low	None	N

IOP/ KOP	Site Name	BLM Field Office	Site Type	Distance from IOP/KOP to Existing Cultural Modifications (Other Landscape Elements)	VRI Class/ VRM Class	Within SRBOP (Y/N)	Project Route Segment	Distance from IOP/ KOP to VISIBLE Project Segment	Visual Contrast Rating	Impact – Scenic/ Visual	Impact – Cultural/ Historic	Impact - Recreation	Impact – Natural	Recom- mended EPMs and Mitigation
							Route 8A (FEIS)	2.7 miles NE	Weak	Low	No Adverse Impact	Low	None	N
Analysis	Unit 2													
C108	Bennett	Four Rivers	Visual; Cultural; Historic	Transmission lines 1 mi. NE and 2.7 mi. NE	VRI III VRM 1	N	Route 8A (FEIS)	1.5 mi. NE	Weak	Low	No Adverse Impact	Low	None	N
	Mountain Road		Property				Rev. Prop. Route 8/FEIS Prop. Route 8(overlap)	2.8 mi. N	Weak	Low	No Adverse Impact	Low	None	Z
C1516		Four Rivers	Cultural; Recreation	Transmission lines 0.5 and 0.9 mi. SW; Wind farms 4 to 10 mi. SE	VRI III VRM 1	N	Rev. Prop. Route 8 / Route 8A (FEIS) / FEIS Prop. Route 8(overlap)	1.3 mi. SW	Weak	Low	No Adverse Impact	Low	None	Z
C1517	Kelton Rd Recreation Site-Hot Springs Creek	Four Rivers	Cultural; Recreation	Transmission lines 1 mi. SW, 1.7 mi. SW, 2.5 mi. SW	VRI III VRM 1	N	Rev. Prop. Route 8 / Route 8A (FEIS) / FEIS Prop. Route 8(overlap)	2.5 mi. SW	Weak	Low	No Adverse Impact	Low	None	N
C1518	Kelton Rd Recreation Site-Parallels OT Segment	Four Rivers	Cultural; Recreation	Transmission lines 1.7 SW mi., 2.3 mi. SW, 3.1 mi. SW, .1 mi. N; Communication tower 2+ mi. NW; Wind farm 9 mi. SE.	VRI III VRM 1	N	Rev. Prop. Route 8 / Route 8A (FEIS) / FEIS Prop. Route 8(overlap)	3.3 mi. SW	Weak	Low	No Adverse Impact	Low	None	N
C1519	Rocky Road Hiking Area and Trail Ruts	Four Rivers	Cultural; Recreation	Transmission lines 0.9 mi. SW, 1.5 mi. SW, 2.3 mi. SW, 0.7 mi. N	VRI III VRM 1	N	Rev. Prop. Route 8 / Route 8A (FEIS) / FEIS Prop. Route 8(overlap)	2.6 mi. SW	Weak	Low	No Adverse Impact	Low	None	N

IOP/ KOP	Site Name	BLM Field Office	Site Type	Distance from IOP/KOP to Existing Cultural Modifications (Other Landscape Elements)	VRI Class/ VRM Class	Within SRBOP (Y/N)	Project Route Segment	Distance from IOP/ KOP to VISIBLE Project Segment	Visual Contrast Rating	Impact – Scenic/ Visual	Impact – Cultural/ Historic	Impact - Recreation	Impact – Natural	Recom- mended EPMs and Mitigation
C1520	Interpretive Sign and Visible Ruts	Four Rivers	Cultural	Transmission lines 1.7 mi. SW, 2.3 mi. SW, 3.1 mi. SW, 0.6 mi. N	VRI III VRM 1	N	Rev. Prop. Route 8 / Route 8A (FEIS) / FEIS Prop. Route 8(overlap)	3.3 mi. SW	Weak	Low	No Adverse Impact	Low	None	Z
C1521	Byway Road Parallels OT Route	Four Rivers	Recreation	Transmission lines0.2 mi. SW, 2.9 mi. SW, 3.4 mi. SW, 4.2 mi. SW.	VRI III VRM 1	N	Rev. Prop. Route 8 / Route 8A (FEIS) / FEIS Prop. Route 8 (overlap)	4.5 mi. SW	Weak	Low	No Adverse Impact	Low	None	N
C1522	Interpretive Sign and Historic Inscription Point	Four Rivers	Interpretati on; Cultural	Distribution line follows road; Transmission lines0.1 mi. SW, 2.6 mi. SW, 3.2 mi. SW, 3.9 mi. SW; fence; road.	VRI III VRM 1	N	Rev. Prop. Route 8 / Route 8A (FEIS) / FEIS Prop. Route 8 / Route 8B (overlap)	4.3 mi. SW	Weak	Low	No Adverse Impact	Low	None	N
Analysis														
C113	Oregon NHT South Alternate	Four Rivers	Visual; Cultural; Historic Property	ID Hwy 78 60 m S; Transmission line 60 m S; Waste transfer station 25 m south.	VRI II VRM 2	Y	Route 8G/ Route 8H/ FEIS Prop. Route 9/ Rev. Prop. Route 9/ Route 9K (overlap)	2.8 mi. SE	Weak/	Low	No Adverse Impact	Low	None	N
C120	Oregon NHT South Alternate	Four Rivers	Visual; Cultural; Historic Property	Transmission line 0.8 mi. NW	VRI II VRM 2	Y	Route 8H/ Rev. Prop. Route 9/ Routes 9D/9G (FEIS) (overlap)	2.1 mi. SW	Weak	Low	No Adverse Impact	Low	None	N

IOP/ KOP	Site Name	BLM Field Office	Site Type	Distance from IOP/KOP to Existing Cultural Modifications (Other Landscape Elements)	VRI Class/ VRM Class	Within SRBOP (Y/N)	Project Route Segment	Distance from IOP/ KOP to VISIBLE Project Segment	Visual Contrast Rating	Impact – Scenic/ Visual	Impact – Cultural/ Historic	Impact - Recreation	Impact – Natural	Recom- mended EPMs and Mitigation
C1133	Recreation View	Four Rivers	Visual; Recreation	Electrical distribution line SW and W.	VRI II VRM 1	N	Route 8H/ FEIS Prop. Route 9/ Rev. Prop. Route 9/ Routes 9G/9H (FEIS) (overlap)	0.45 mi. S	Strong	Moderate	No Adverse Impact	Moderate	None	N
C1508	OT Crossing- Route 9D	Four Rivers	Cultural	Transmission line 2 mi. N	VRI II VRM 2	Y	Route 9D/9G (FEIS) (overlap)	crossing	Strong	High	Adverse	Moderate	None	Y
							Route 9F/9H (FEIS) (overlap)	N/A (not visible)	Weak	Low	No Adverse Impact	Low	None	N
							Rev. Prop. Route 9	2.75 mi. NE	Weak	Low	No Adverse Impact	Low	None	N
C1155	Recreation View	Four Rivers	Visual; Recreation	Transmission lines 200 m N.	VRI II VRM 2	Y	Routes 9D/9G (FEIS) (overlap)	.07 mi. W	Strong	High	Adverse	Moderate	None	Y
							Route 8 H/ Rev. Prop. Route 9 (overlap)	0.48 mi. N	Strong	High	Adverse	Moderate	None	Y
C1501	CJ Strike Ruts	Four Rivers	Cultural; Recreation	Transmission lines 1.8 mi. N and 2.8 mi. NW; Hwy 78 0.1 mi. SW.	VRI II VRM 2	Y	FEIS Prop. Route 9	1.7 mi. S N/A (not visible)	Weak	Low	No Adverse Impact	Low	None	N
				ow.			Route 9D/9G (FEIS)	0.1 mi. SW	Strong	Moderate	Adverse	Moderate	None	Y
							(overlap)							
							Route 9F/9H (FEIS)	visible)	Weak	Low	No Adverse Impact	Low	None	N
							Rev. Prop. Route 9	0.9 mi. NW	Moderate	Low	Adverse	Moderate	None	Y

IOP/ KOP	Site Name	BLM Field Office	Site Type	Distance from IOP/KOP to Existing Cultural Modifications (Other Landscape Elements)	VRI Class/ VRM Class	Within SRBOP (Y/N)	Project Route Segment	Distance from IOP/ KOP to VISIBLE Project Segment	Visual Contrast Rating	Impact – Scenic/ Visual	Impact – Cultural/ Historic	Impact - Recreation	Impact – Natural	Recom- mended EPMs and Mitigation
C1502	Cove at CJ Strike Reservoir	Four Rivers	Recreation	CJ Strike Reservoir 200+ m N; Transmission lines: crossing trail, 1 mi.	VRI II VRM 2	Y	FEIS Proposed Route 9	2.5 mi. S N/A (not visible)	None	None	No Impact	None	None	N
				N, 1.7 mi. NW; fence crosses trail; agricultural field on trail			Route 8H/ Rev. Prop. Route 9 / Routes 9D/9G (FEIS) (overlap)	crossing	Strong	Moderate	Adverse	Moderate	None	Y
							Routes 9F/9H (FEIS)	N/A (not visible)	Weak	Low	No Adverse Impact	Low	None	N
C137	Simulation Point	Four Rivers	Visual; Cultural	Oregon Trail Road (paved access road): crosses trail; Transmission lines cross trail; Agricultural fields1	VRI II VRM 2	Y	Route 8H/ FEIS Prop. Route 9/ Rev. Prop. Route 9 (overlap)	crossing	Moderate	Low	No Adverse Impact	Low	None	N
				mi. N			Routes 9D/9G/9H (FEIS) (overlap)	N/A (not visible)	Weak	Low	No Adverse Impact	Low	None	N
C1526	North Side of CJ Strike	Four Rivers	Cultural	Transmission line 100 m S.	VRI II VRM 2	Y	Rev. Prop. Route 9	0.1 mi. S	Strong	Moderate	Adverse	Moderate	None	Y
	Reservoir						Routes 9D/9G (FEIS) (overlap)	1.4 mi. SE	Weak	Low	No Adverse Impact	Low	None	N
Analysis	Unit 4					•	•		•			•		•
C1528	Utter Massacre Site (HPHS)	Owyhee	Cultural		VRI II VRM 4	N	FEIS Proposed Route 9/ Routes 9K/8G (overlap)	2.3 mi. SW	Weak	Low	No Adverse Impact	Low	None	N

IOP/ KOP	Site Name	BLM Field Office	Site Type	Distance from IOP/KOP to Existing Cultural Modifications (Other Landscape Elements)	VRI Class/ VRM Class	Within SRBOP (Y/N)	Project Route Segment	Distance from IOP/ KOP to VISIBLE Project Segment	Visual Contrast Rating	Impact – Scenic/ Visual	Impact – Cultural/ Historic	Impact - Recreation	Impact – Natural	Recom- mended EPMs and Mitigation
C1523	OT Castle Butte Landmark	Four Rivers	Visual Resource	Transmission line 4.4 mi. NE; barbed wire fence crosses trail. Hazardous waste landfill 2 mi. S.	VRI II VRM 2	Y	Route 8 H/ Rev. Prop. Route 9/ Routes 8E/ 9D/9F/9G/ 9H (FEIS) (overlap)	4.4 mi. NE	Weak	Low	No Adverse Impact	Low	None	N
C1524	Wild Horse Butte	Four Rivers	Visual Resource	Transmission line 3.9 mi. NE; power lines 2+ mi. SE.	VRI II VRM 2	Y	Route 8H/ Rev. Prop. Route 9/ Routes 9D/9F/9G/9 H (FEIS) (overlap)	3.9 mi. NE	Weak	Low	No Adverse Impact	Low	None	N
							Routes 8G/9K (overlap)	4.74 mi. SW	Weak	Low	No Adverse Impact	Low	None	N
C1527	HPSEG Near Sinker Creek Butte	Four Rivers	Cultural	Two-track road on trail; Transmission line 1 mi. N.	VRI II VRM 2	Y	Routes 9G/9H (FEIS) (overlap)	0.4 mi. NE	Strong	Moderate	Adverse	Moderate	None	Y
							Route 8 H/ Rev. Prop. Route 9 (overlap)	1.1 mi. N	Strong	Moderate	Adverse	Moderate	None	Y
						Y	Routes 8E/9D/9F (FEIS) (overlap)	1.9 mi. NE	Moderate	Low	No Adverse Impact	Low	None	N
C91	Oregon NHT South Alternate Sinker Creek	Four Rivers	Visual; Cultural; Historic Property	Transmission lines 0.5 mi. E, 4 mi. NE	VRI II VRM 2	Y	Routes 9G/9H (FEIS) (overlap)	0.5 mi. N	Strong	Moderate	Adverse	Moderate	None	Y
	Butte Area						Routes 8E (FEIS), 9D/9F	2.3 mi. NE	Weak	Low	No Adverse Impact		None	N
							Route 8H/ Rev. Prop. Route 9 (overlap)	0.5 mi. N	Strong	Moderate	Adverse	Moderate	None	Y

IOP/ KOP	Site Name	BLM Field Office	Site Type	Distance from IOP/KOP to Existing Cultural Modifications (Other Landscape Elements)	VRI Class/ VRM Class	Within SRBOP (Y/N)	Project Route Segment	Distance from IOP/ KOP to VISIBLE Project Segment	Visual Contrast Rating	Impact – Scenic/ Visual	Impact – Cultural/ Historic	Impact - Recreation	Impact – Natural	Recom- mended EPMs and Mitigation
C132	Simulation Point	Four Rivers	Visual; Cultural	Transmission lines 4.6 mi. N, 6.8 mi. SE	VRI II VRM 2	Y	Route 8H/ Rev. Prop. Route 9 (overlap)	crossing	Strong	Moderate	Adverse	Moderate	None	Y
							Routes 9D/9F (FEIS) (overlap)	0.2 mi. NW	Strong	Moderate	Adverse	Moderate	None	Y
							Routes 9G/9H (FEIS) (overlap)	0.5 mi. S	Strong	Moderate	Adverse	Moderate	None	Y
							FEIS Prop. Route 9	1.2 mi. SW	Weak	Low	No Adverse Impact	Low	None	N
							FEIS Prop. Route 8/ Route 8E (FEIS) (overlap)	2.0 mi. N	Weak	Low	No Adverse Impact	Low	None	N
C1507	OT Crossing- Route 9G	Four Rivers	Cultural	Town of Murphy 0.3 mi. S; ID Hwy 78 0.3 mi. S; Earthen dam 100 ft. N.	VRI II VRM 2	Y	Route 8H/ Rev. Prop. Route 9 (overlap)	0.81 mi. NE	Moderate	Low	No Adverse Impact	Low	None	N
							Route 9D/9F (FEIS) (overlap)	1.32 mi. NE	Moderate	Low	No Adverse Impact	Low	None	N
							Routes 9G/9H (FEIS) (overlap)	crossing	Strong	Moderate	No Adverse Impact	Low	None	N
							FEIS Prop. Route 9	1.3 mi. SW	Weak	Low	No Adverse Impact	Low	None	N
							FEIS Prop. Route 8	2.5 mi. NE	Weak	Low	No Adverse Impact	Low	None	N

IOP/ KOP	Site Name	BLM Field Office	Site Type	Distance from IOP/KOP to Existing Cultural Modifications (Other Landscape Elements)	VRI Class/ VRM Class	Within SRBOP (Y/N)	Project Route Segment	Distance from IOP/ KOP to VISIBLE Project Segment	Visual Contrast Rating	Impact – Scenic/ Visual	Impact – Cultural/ Historic	Impact - Recreation	Impact – Natural	Recom- mended EPMs and Mitigation
C1514	OT Crossing- Rev. Prop.	Four Rivers	Cultural	Town of Murphy 1 mi. S; ID Hwy 78 S;	VRI II VRM 2	Y	Rev. Prop. Route 9	crossing	Strong	Moderate	Adverse	Moderate	None	Y
	Route 9			Con Shea Road W.			Routes 9D/9F (FEIS) (overlap)	0.7 mi. NE	Strong	Moderate	Adverse	Low	None	Y
							Routes 9G/9H (FEIS) (overlap)	0.7 mi. SW	Strong	Moderate	No Adverse Impact	Low	None	N
							FEIS Prop. Route 9	1.8 mi. SW	Moderate	Low	No Adverse Impact	Low	None	N
							FEIS Prop. Route 8	1.7 mi. NE	Moderate	Low	No Adverse Impact	Low	None	N
C1505	OT Crossing- FEIS Prop. Route 8	Four Rivers	Cultural	On-site OHV trail; Ranch 1 mi. NW	VRI II VRM 2	Y	FEIS Prop. Route 8	crossing	Strong	Moderate	Adverse	Moderate	None	Y
							Route 8H/ Rev. Prop. Route 9 (overlap)	1.6 mi. S	Moderate	Low	No Adverse Impact	Low	None	N
							FEIS Proposed Route 9	3.2 mi W and SW	Weak	Low	No Adverse Impact	Low	None	N
							Route 8E (FEIS)	1 mi. E	Strong	Moderate	No Adverse Impact	Low	None	N
							Routes 9D/9F (FEIS) (overlap)	1.1 mi. S	Moderate	Low	No Adverse Impact	Low	None	N
							Routes 9G/9H (FEIS) (overlap)	2.4 mi. S	Weak	Low	No Adverse Impact	Low	None	N

IOP/ KOP	Site Name	BLM Field Office	Site Type	Distance from IOP/KOP to Existing Cultural Modifications (Other Landscape Elements)	VRI Class/ VRM Class	Within SRBOP (Y/N)	Project Route Segment	Distance from IOP/ KOP to VISIBLE Project Segment	Visual Contrast Rating	Impact – Scenic/ Visual	Impact – Cultural/ Historic	Impact - Recreation	Impact – Natural	Recom- mended EPMs and Mitigation
C90	Oregon NHT South Alternate Snake River	Four Rivers	Cultural; Historic Property	Town of Murphy 1 mi. S; Transmission line 6.5 mi. SE	VRI II VRM 2	Y	Routes 9G/9H (FEIS) (overlap)	0.1 mi. S	Strong	Moderate	Adverse	Moderate	None	Y
	Birds of Prey						Routes 9D/9F (FEIS) (overlap)	0.2 mi. NW	Strong	Moderate	Adverse	Low	None	Y
							Route 8H/ Rev. Prop. Route 9 (overlap)	0.4 mi. NW	Strong	Moderate	Adverse	Low	None	Y
							Route 9I (FEIS)	N/A (not visible)	Weak to Moderate	Low	No Adverse Impact	Low	None	N
							Rev. Prop. Route 8	2.3 mi. N	Weak	Low	No Adverse Impact	Low	None	N
							FEIS Prop. Route 9	1-2 mi. S and SW	Weak	Low	No Adverse Impact	Low	None	N
							FEIS Prop. Route 8	2.3 mi. N	Weak	Low	No Adverse Impact	Low	None	N
C1506	OT Crossing- Route 9D	Four Rivers	Cultural	N/A	VRI II VRM 2	Y	Routes 9G/9H (FEIS) (overlap)	1.4 mi. S	Weak	Low	No Adverse Impact	Low	None	N
							FEIS Prop. Route 8	1.1 mi. N	Moderate	Low	No Adverse Impact	Low	None	N
							Routes 9D/9F (FEIS) (overlap)	crossing	Strong	Moderate	Adverse	Moderate	None	Y
							Rev. Prop. Route 8	N/A (not visible)	Weak	Low	No Impact	Low	None	N
							Route 8E (FEIS)	1.3 mi. NE	Moderate	Low	No Adverse Impact	Low	None	N

IOP/ KOP	Site Name	BLM Field Office	Site Type	Distance from IOP/KOP to Existing Cultural Modifications (Other Landscape Elements)	VRI Class/ VRM Class	Within SRBOP (Y/N)	Project Route Segment	Distance from IOP/ KOP to VISIBLE Project Segment	Visual Contrast Rating	Impact – Scenic/ Visual	Impact – Cultural/ Historic	Impact - Recreation	Impact – Natural	Recom- mended EPMs and Mitigation
							FEIS Prop. Route 9/ Rev. Prop. Route 9 (overlap)	0.6 mi. SW	Moderate	Low	No Adverse Impact	Low	None	N
Analysis														
C1513	OT Crossing- Rev. Prop. Route 8	Shoshone	Cultural	Transmission line crosses trail; wind farms 5 mi. SW. Grain silos 2 mi. S.	VRI III VRM 3	N	Rev. Prop. Route 8/FEIS Prop. Route 8(overlap)	crossing	Moderate	Low	Adverse	Moderate	None	Y
C1512	OT Crossing- Rev. Prop. Route 8	Shoshone	Cultural	Transmission line .26 mi. SW	VRI III VRM 2	N	Rev. Prop. Route 8/FEIS Prop. Route 8(overlap)	crossing	Moderate	Low	Adverse	Moderate	None	Y
C85	Oregon NHT North Alternate Pioneer Reservoir	Shoshone	Visual; Cultural; Historic Property	Transmission line 0.3 mi. S; Wind farms 7 mi. SE; Pioneer Reservoir 150 m E; House1 mi. NE on hilltop overlooking reservoir.	VRI III VRM 2	N	Rev. Prop. Route 8/FEIS Prop. Route 8(overlap)	0.1 mi. W and SW	Moderate	Low	Adverse	Moderate	None	Y
C84	Oregon NHT North Alternate King Hill	Shoshone	Visual; Cultural; Historic Property	BLM road crosses trail; agricultural field on trail; fence parallel to BLM road; transmission lines 0.1 mi. N and 0.8 mi. N	VRI III VRM 2	N	Rev. Prop. Route 8/FEIS Prop. Route 8(overlap)	1.0 mi. N	Moderate	Weak	Adverse	Low	None	Y
C83	Oregon NHT North Alternate Canyon Creek near Stage	Four Rivers	Visual; Cultural; Historic Property; Recreation	King Hill Rd crosses trail; transmission towers 0.5 mi. N; transmission lines 1.8 mi. SE; wind	VRI III VRM 1	N	Rev. Prop. Route 8 /FEIS Prop. Route 8(overlap)	0.5 mi. N	Moderate	Low	Adverse	Moderate	None	Y
	Station			farms 6.4 mi. S.			Route 8A (FEIS)	N/A (not visible)	Weak	Low	No Adverse Impact	Low	None	N

IOP/ KOP	Site Name	BLM Field Office	Site Type	Distance from IOP/KOP to Existing Cultural Modifications (Other Landscape Elements)	VRI Class/ VRM Class	Within SRBOP (Y/N)	Project Route Segment	Distance from IOP/ KOP to VISIBLE Project Segment	Visual Contrast Rating	Impact – Scenic/ Visual	Impact – Cultural/ Historic	Impact - Recreation	Impact – Natural	Recom- mended EPMs and Mitigation						
C1511		our Cultural King Rivers trail line Wir		VRI III VRM 1		Rev. Prop. Route 8/FEIS Prop. Route 8(overlap)	crossing	Strong	Moderate	Adverse	Moderate	None	Y							
							Route 8A (FEIS)	2.8 mi. SW	Weak	Low	No Adverse Impact	Low	None	N						
C1503	Emigrant Reservoir	Four Rivers	Recreation	1.2 mi. S, 2.9 mi, SW, 4.2 mi. SW; N. Berry Ranch Road	1.2 mi. S, 2.9 mi, SW, 4.2 mi. SW; N. Berry Ranch Road	1.2 mi. S, 2.9 mi, SW, 4.2 mi. SW; N. Berry Ranch Road	1.2 mi. S, 2.9 mi, SW, 4.2 mi. SW; N. Berry Ranch Road	1.2 mi. S, 2.9 mi, SW, 4.2 mi. SW; N.	1.2 mi. S, 2.9 mi, SW, 4.2 mi. SW; N. Berry Ranch Road	1.2 mi. S, 2.9 mi, SW, 4.2 mi. SW; N. Berry Ranch Road	VRI III VRM 1		Rev. Prop. Route 8/FEIS Prop. Route 8(overlap)	1.5 mi. S	Moderate	Low	Adverse	Moderate	None	Y
			trail; Emigrant Reservoir, at trail; Wind farms 7.3 mi. SW	Reservoir, at trail; Wind farms 7.3 mi.				Route 8A (FEIS)	4 mi. SW	Weak	Low	No Adverse Impact	Low	None	N					
C118	Oregon NHT North Alternate south side of Blair Trail Reservoir	Four Rivers	Visual; Cultural; Historic Property	Transmission lines VRI III	mi, and VRM 1					N	Rev. Prop. Route 8/ FEIS Prop. Route 8(overlap)	1.5 mi. S (beyond existing H- frame and 500 kV lattice tower).	Weak	Low	No Adverse Impact	Low	None	N		
							Route 8A (FEIS)	3.0 mi. SW	Weak	Low	No Adverse Impact	Low	None	N						
C1510	OT Crossing- Route 8A	Four Rivers	Visual; Cultural	Transmission lines 1 mi. N; Wind farms 3.1 mi. SW.	VRI III VRM 1	N	Rev. Prop. Route 8/FEIS Prop. Route 8(overlap)	0.8 mi. N	Weak	Low	No Adverse Impact	Low	None	N						
							Route 8A (FEIS)	crossing	Moderate	Low	Adverse	Low	None	N						
C1525	Study Trail Segment between Bennett Creek and Cold Springs Creek	Four Rivers	Cultural	Transmission lines 1 and 2.4 mi. SW; wind farms 4 mi. S and SE.	VRI III VRM 1	N	Rev. Prop. Route 8/ FEIS Prop. Route 8(overlap)	2.9 mi. SW	Weak	Low	No Adverse Impact	Low	None	N						

Notes: IOP – Inventory Observation Point; KOP – Key Observation Point; VRI – Visual Resource Inventory; VRM – Visual Resource Management; SRBOP – Morley Nelson Snake River Birds of Prey National Conservation Area

Catoway	M/act	Transmission	I ina	Draft	SEIS
Galeway	VVESI	Halisillission	ᄔᆘᄖ	Dian	o⊏io

Appendix K

Compensatory Mitigation for Raptor Habitat in the Morley Nelson Snake River Birds of Prey National Conservation Area: Methods and Conceptual Model Example

1 INTRODUCTION

Conservation Area (SRBOP) in part "to provide for the conservation, protection, and enhancement of raptor populations and habitats and the natural and environmental resources and values associated therewith, and of the scientific, cultural, and educational resources and values of the public lands in the conservation area" (Section 3(a)(2) of P.L. 103-64 [1993]). Therefore, the BLM must demonstrate that the proposed right-of-way (ROW) for the Gateway West Transmission Line Project (Project), which would use portions of the SRBOP if approved, would meet the established purposes of the SRBOP, especially the protection and enhancement of identified SRBOP resources and values.

Other federal policies mandate that mitigation be implemented to offset impacts incurred within the SRBOP. These include: 1) the Presidential Memorandum of November 3, 2015; 2) Department of the Interior Manual 600 DM 6; and 3) the BLM Interim Mitigation Policy (2013-WO-IM-142).

- The November 3, 2015, Presidential Memorandum Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment (80 Federal Register 68743) directs agencies to implement landscape-scale mitigation for project development impacts. The Memorandum states that "Agencies' mitigation policies should establish a net benefit goal or, at a minimum, a no net loss goal for natural resources the agency manages that are important, scarce, or sensitive, or wherever doing so is consistent with agency mission and established natural resource objectives." In addition, it states that mitigation "occurs through policies that direct the planning necessary to address the harmful impacts on natural resources by avoiding and minimizing impacts, then compensating for impacts that do occur."
- In October 2015, the Department of the Interior released Manual 600 DM 6: "Implementing Mitigation at the Landscape-scale" (DOI 2015), which implements landscape-scale mitigation for impacts from projects. The mitigation guidance states that "compensatory mitigation means to compensate for remaining unavoidable impacts after all appropriate and practicable avoidance and minimization measures have been applied, by replacing or providing substitute resources, or environments."
- The BLM Interim Mitigation Policy (2013-WO-IM-142) states that the BLM will identify, analyze and require compensatory mitigation, as appropriate, to address reasonably foreseeable residual effects from land use activities to resources, values, and functions.

Idaho Power and Rocky Mountain Power (the Proponents) developed a Mitigation and Enhancement Portfolio (MEP) as part of the Proposed Action (Appendix C to this document), which is intended to offset impacts to and enhance resources and values found in the SRBOP. The MEP proposes measures to address the effects that persist

after all appropriate and practicable avoidance and minimization measures have been applied to return an impacted area to baseline conditions, such as 1) habitat restoration, 2) purchasing private inholdings within the SRBOP, 3) added funding of law enforcement, 4) funding for visitor services, and 5) removal of some existing powerlines in the SRBOP.

The lack of details or specifics in the MEP makes it unclear how the proposal's goals would be achieved. Most importantly, the MEP does not contain a methodology and a reliable, consistent, and repeatable accounting system to determine the expected impacts of actions and the measures necessary to compensate for those impacts based on a common "currency" (i.e., raptor habitat value per acre). Therefore, it is not adequate in the form submitted as part of the Revised Plan of Development for the Project.

To address this deficiency, the BLM has developed a model compensatory mitigation accounting system that can be used to assess impacts to raptor habitat in the SRBOP. Raptor habitat is assumed to be a suitable surrogate for assessing adverse impacts (i.e., debits) and beneficial effects (i.e., credits) to raptor populations. The methods described in this Appendix and demonstrated in the conceptual model would determine compensatory mitigation debits and credits for any authorization that impacts raptor habitat in the SRBOP. If an action alternative is selected in the Final SEIS, the BLM will fully apply compensatory mitigation analysis to the selected route alignments and present that analysis and the appropriate calculations in the Final SEIS. The model may also be revised or refined between the Draft and Final SEIS based on feedback received on the Draft SEIS.

These methods apply only to compensatory mitigation for raptor habitat in the SRBOP. Other impacts to resources that warrant compensatory mitigation are addressed in other sections of this Draft SEIS and/or the original 2013 Final EIS for the Gateway West project (e.g., Greater sage-grouse compensatory mitigation in Final EIS Appendix C).

2 MANAGEMENT OBJECTIVES AND GOALS FOR THE SRBOP

The Resource Management Plan (RMP) for the SRBOP emphasizes the restoration and rehabilitation of all areas outside the Idaho Army National Guard Orchard Combat Training Area to bring raptor populations and habitat to more desirable conditions. The RMP identifies appropriate management actions to avoid or minimize environmental impacts where practicable, while meeting the purposes for which the SRBOP was established. The RMP states that mitigation may also be developed during site-specific activity and project-level analysis to meet management direction for the SRBOP. This direction includes:

- Protecting remaining shrub communities,
- Restoring shrub habitat,
- Completing fuels management projects,
- Designating rights-of-way and energy corridors, and

Managing visual resources.

Three Management Areas (MAs) and corresponding Desired Future Conditions (DFCs) for vegetation are designated and prioritized in the RMP. The MAs identify locations where specific management actions, including rehabilitation and fire suppression, are prioritized based on ecological resiliency and function to achieve highest restoration potential and fire management priority.

- MA 1 is composed of sagebrush and salt desert shrub communities, and is identified in the RMP as the area within the SRBOP most resistant and resilient to disturbance with the highest probability of restoration success (BLM 2008).
- Areas designated as MA 2 still contain habitat structure (e.g., shrub communities) that provide some habitat connectivity value for supporting a raptor prey base, but to a lesser extent than what is found in MA 1.
- MA 3 is managed at a lower priority level than MA 1 or 2 due to almost complete loss of shrub structure and the associated lack of ecological resilience and resistance of the current plant communities.

 Table 1.
 Vegetation Community Condition Classes and Relative Raptor Habitat Value

-	Canopy			
Condition Class	Sage- brush	Invasive Annual Grass	Other	Habitat Value
Ecological Potential (EP)	≥ 15	< 50	native perennial grass > seeding	1.0
Early-seral Native Shrubland/Grassland (NSG)	< 15	< 50	native perennial grass > seeding	0.8
Shrublands/Invasive Annual Grasses (SX)	≥ 5	≥ 50	NA	0.6
Non-native Seeding (NNS)	< 15	< 50	seeding > native perennial grass	0.4
Invasive Annual Grassland/Forbs (X)	< 5	≥ 50	NA	0.2
Facility/Developed Sites	0	0	NA	0.0

Table 1 shows the various condition classes for vegetation communities found in the SRBOP. The DFC of MA 1 is a mosaic of multi-aged shrubs, forbs, and native and adapted non-native perennial grasses (i.e., Ecological Potential [EP]). Although this DFC is synonymous with the highest-valued raptor habitat, other condition classes provide *suitable* raptor habitat (i.e., grass-dominated native shrubland/grassland [NSG]) or *adequate* raptor habitat (i.e., multi-aged shrubland with an invasive grass understory [SX]) due to the community's increased ability to move to a higher condition class (via the restoration pathways shown in Figure E) or remaining vegetative structure.

3 COMPENSATORY MITIGATION FRAMEWORK

Mitigation Standard for the SRBOP

The overall credits from compensatory mitigation must exceed the overall debits of the Project to result in enhancement (i.e., net benefit) to SRBOP raptor populations and habitats (see Section 3.1 below for Calculation of Baseline). Enhancement is defined as an improvement over current baseline conditions.

Compensatory Mitigation Measures

Habitat restoration treatments are the primary compensatory mitigation the BLM will require to address impacts from the construction of Gateway West to SRBOP raptor populations and habitats.

Siting Compensatory Mitigation

Habitat restoration treatments would primarily be conducted within MA 1 because the RMP identifies this area as having the highest probability of restoration success (BLM 2008). The method assumes that the EP of an area is specific to the Ecological Site Descriptions (ESDs) of the vegetation community.

In addition, habitat restoration treatments would be located within fuel break compartments that contain a gradient of the raptor habitat condition classes described in Table 1. Fuel breaks will compartmentalize habitat restoration areas to provide durability for treatments.

Restoration treatment areas within MA 1 will be defined and prioritized, based on:

- 1. where treatments would provide the best connectivity between existing shrub communities:
- 2. where perennial native and non-native vegetation (seedings) exist and provide stable ecological conditions that facilitate restoration success;
- 3. where existing ongoing restoration and research demonstration projects can continue to be leveraged; and,
- 4. where sites have the ability to achieve EP or NSG (i.e., DFCs for SRBOP raptor habitat).

It should be noted that, depending on initial condition class, it may take multiple treatments to achieve DFC for raptor habitat (Figure E). In addition, the entire SRBOP is a finite area, and areas identified for restoration treatments will be further bounded to ensure a relationship between Project impacts and mitigation measures. All compensatory mitigation measures must be durable for the duration of the Project impacts, and thus provide benefit to SRBOP raptor populations and habitats for that duration.

3.1 Mechanics of the Model

Calculating Current Baseline

One method for establishing a baseline for SRBOP raptor habitat is to assign values to vegetation community condition classes based on the services and functions they provide as habitat for raptors and raptor prey. For this example, one of five condition classes (Table 1) is assigned to each acre within the analysis area. Each condition class carries a habitat value between 0 and 1. When considered cumulatively, a mean per-acre habitat value can be calculated for the area and impacts (i.e., debits) and offsets (i.e., credits) assessed for habitat loss and restoration treatments, respectively. The mean SRBOP habitat value for an analysis area is calculated by averaging the habitat values of each acre within the analysis area. The resulting mean habitat value would represent the current baseline before Project impacts.

Calculating Debits

The construction, operation and maintenance of the Gateway West Project would result in complete loss and degradation of SRBOP raptor habitats at locations where facilities are sited and construction areas surrounding these facilities, which generally would be cleared of vegetation during construction. Some of these construction areas would be restored over time to EP, while other areas immediately surrounding facilities would be periodically re-disturbed or maintained in a condition class with relatively lower habitat value (e.g., NSG or NNS). These areas may continue to experience ongoing disturbance during operation but could also retain some raptor habitat component. A minor subset of the Project's overall disturbances would result in complete loss of habitat value; within the SRBOP this would mostly be limited to the footprint of individual facilities.

3.2 Conceptual Model Example: Mitigation Calculations for Impacts Resulting in Complete Loss of Habitat within Management Area 1

The following example uses the model method to calculate the debits and required credits (i.e., the mitigation requirements) related to impacts of a hypothetical project sited within MA 1 for acres with a complete loss of habitat (i.e., mitigation to compensate for the Project's permanent footprint). Similar but modified methods would be used for the other impacts (i.e., temporary, non-periodic and temporary, periodic impacts) in MA 1, as well as all impacts in MA 2 and MA 3.

Calculation of Existing Baseline Condition

First, assume that each cell in Figure 1 represents one acre of a Wyoming Big Sagebrush habitat of varying condition classes, each of which has a different potential restoration pathway (as shown in Figure E). The example area (Figure A) has a finite area of 30 acres (A1) that contain a variety of condition classes with different habitat values (A2). The mean value of the raptor habitat in this area is **0.57/acre** (A3).

Figure A. Existing Baseline Condition

EP	EP	EP	NSG	SX
(1.0)	(1.0)	(1.0)	(8.0)	(0.6)
EP	EP	EP	SX	X
(1.0)	(1.0)	(1.0)	(0.6)	(0.2)
EP	EP	SX	NNS	X
(1.0)	(1.0)	(0.6)	(0.4)	(0.2)
NSG	NNS	NSG	Х	X
(8.0)	(0.4)	(8.0)	(0.2)	(0.2)
Χ	Х	Х	SX	SX
(0.2)	(0.2)	(0.2)	(0.6)	(0.6)
X	Х	Х	SX	NNS
(0.2)	(0.2)	(0.2)	(0.6)	(0.4)

- A1). 30 acre area of Wyoming Big Sagebrush Ecological Site
- A2). EP: 8*1.0 = 8.0; NSG: 3*0.8 = 2.4; SX: 6*0.6 = 3.6; NNS: 3*0.4 = 1.2; X: 10*0.2 = 2.0
- A3). Mean habitat condition value = (8.0+2.4+3.6+1.2+2.0) = 17.2/30 acres = **0.57/acre**

Calculation of Debits for Permanent Project Impacts

Figure B displays the effects of the hypothetical project consisting of components that result in a complete loss of 5 acres of habitat (e.g., conversion of habitat to permanent facility footprint; red rectangles in Figure B). In this example, habitat loss within the area would last for the life of the project (i.e., a permanent impact; B1), and the BLM would permanently lose the ability to restore the impacted acres to their EP (as per RMP Objectives and Management Actions, BLM 2008). The habitat values for each of the lost acres would be reduced to 0, and consequently, the resulting mean habitat value is reduced to **0.49/acres** (B2 and B3).

Figure B. Debits for Permanent Project Impacts

EP	EP	EP	NSG	SX
(1.0)	(1.0)	(1.0)	(8.0)	(0.6)
EP	EP	EP	SX	Х
(1.0)	(1.0)	(1.0)	(0.6)	(0.2)
EP	EP	SX	NNS	Х
(1.0)	(1.0)	(0.6)	(0.4)	(0.2)
NSG	NNS	NSG	X	X
NSG (0.0)	NNS (0.0)	NSG (0.0)	X (0.0)	(0.0)
(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
(0.0) X	(0.0) X	(0.0) X	(0.0) SX	(0.0) SX

B1). Permanent loss of 5 ac of EP potential (red rectangles)

B2). EP: 8*1.0 = 8.0; NSG: 1*0.8 = 0.8; SX: 6*0.6 = 3.6; NNS: 2*0.4 = 0.8; X: 8*0.2 = 1.6

B3). Mean habitat condition value = (8.0+0.8+3.6+0.8+1.6) = 14.8/30 acres = **0.49/acre**

Calculation of Credits for Habitat Restoration Treatments

To return the area to the mean habitat value that existed at baseline, habitat restoration treatments would be required (see Figure C). In the first step, 5 acres at other locations within the affected area (green rectangles in Figure C) would be treated to mitigate the lost habitat value and compensate for the lost opportunity to restore the developed acres to their EP (C1). Habitat values for each treated acre would increase to 1.0 (i.e., the EP; C2). As a result, mean habitat value would increase to **0.55/acre** (C3); however, this would still be below the baseline of **0.57/acre**.

Figure C. Credits for Initial Habitat Restoration Actions

EP	EP	EP	NSG→EP	SX→EP
(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
EP	EP	EP	SX→EP	X
(1.0)	(1.0)	(1.0)	(1.0)	(0.2)
EP	EP	SX→EP	NNS	X
(1.0)	(1.0)	(1.0)	(0.4)	(0.2)
NSG	NNS	NSG	X	X
(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Χ	Х	Х	SX	SX→EP
(0.2)	(0.2)	(0.2)	(0.6)	(1.0)
X	Х	X	SX	NNS
(0.2)	(0.2)	(0.2)	(0.6)	(0.4)

C1). Treat 5 ac to replace lost opportunity to restore 5 ac to EP potential at developed sites

C2). EP: 13*1.0 = 13.0; NSG: 0*0.8 = 0; SX: 2*0.6 = 1.2; NNS: 2*0.4 = 0.8; X: 8*0.2 = 1.6

C3). Mean habitat condition value = (13.0+0+1.2+0.8+1.6) = 16.6/30 acres = **0.55/acre**

Credits for Additional Habitat Restoration Actions

Because the mean habitat value following the initial step would remain below the baseline (i.e., **0.55/acre** after mitigation treatments <**0.57/acre** at baseline), additional acres would need to be treated (Figure D). One approach that could be used to equal or exceed baseline conditions (i.e., increase habitat values) would be treating additional acres to attain DFC for raptor habitat (orange rectangles in Figure D; D1).

In practice, SX (Shrublands/Invasive Annual Grasses) is not a target DFC for habitat restoration treatments. However, SX does provide better structure, and therefore better raptor habitat, than NNS (Non-native Seeding). In turn, although NNS is more desirable for long-term soil stabilization and reduced fire risk than X (Invasive Annual Grassland/Forbs), NNS is also not a DFC for SRBOP raptor habitat (i.e., the focus of habitat management objectives and actions in MA 1).

However, if the existing condition of SX acres not treated in the first step (C1) were replaced at additional treatment sites to condition classes that would provide DFC for raptor habitat (i.e., EP or NSG; D2), the resulting mean habitat values would increase to **0.64/acre** (D3), which would exceed the baseline mean habitat value (A3).

EP	EP	EP	NSG→EP	SX→EP
(1.0)	(1.0)	(1.0)	(1.0)	(1.0)
EP	EP	EP	SX→EP	X→NSG
(1.0)	(1.0)	(1.0)	(1.0)	(0.8)
EP	EP	SX→EP	NNS→EP	Х
(1.0)	(1.0)	(1.0)	(1.0)	(0.2)
NSG	NNS	NSG	Χ	X
(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
X	Х	Х	SX→EP	SX→EP
(0.2)	(0.2)	(0.2)	(1.0)	(1.0)
X	Х	Х	SX→EP	NNS→EP
(0.2)	(0.2)	(0.2)	(1.0)	(1.0)

Figure D. Credits for Additional Habitat Restoration Actions

Any number of alternative scenarios to achieve mean baseline conditions could be substituted for or added to the additional credit step in Figure D, on the condition that treated acres end up in a DFC for SRBOP raptor habitat. Figure E shows various potential pathways for restoration to DFC.

D1). Treat 5 ac to replace loss of 5 ac of Existing Condition (or DFC) at Treatment Sites

D2). EP: $17*1.0 = \frac{17.0}{1}$; NSG: $1*0.8 = \frac{0.8}{0}$; SX: $0*0.6 = \frac{0}{0}$; NNS: $0*0.4 = \frac{0}{0}$; X: $7*0.2 = \frac{1.4}{0}$

D3). Mean condition value = (17.0+0.8+0+0+1.4) = 19.2/30 acres = **0.64/acre**

Conceptual Model Example Summary

This model establishes a logical and transparent approach to assessing baseline conditions as they apply to raptor habitat within the finite area of the SRBOP and provides a simple method for calculating the mitigation required to achieve a return to or exceedance of baseline raptor habitat conditions in the SRBOP, using flexible habitat restoration treatments.

The most important and primary point of the example presented is that returning to baseline conditions requires a habitat restoration ratio greater than 1:1.

General guidelines for habitat restoration treatments that return to or exceed mean baseline conditions include:

- Habitat restoration treatment sites should be prioritized by ability to achieve EP or DFC for raptor habitat.
- Loss of the possibility to achieve EP at permanent impact sites (i.e., Project footprint) should be compensated by uplifting vegetation conditions to EP at additional habitat restoration treatment sites.
- Loss of existing condition at habitat restoration treatment sites could be compensated by uplifting vegetation conditions to DFC for SRBOP raptor habitat (i.e., EP or NSG) at additional habitat restoration treatment sites.

Additional Considerations for Compensatory Mitigation

The risk of failure of habitat restoration treatments will be accounted for in two ways:

- 1. The party responsible for the habitat restoration treatments (i.e., proponent) will be required to achieve the outcome (i.e., a specific habitat condition class), as opposed to specific amount of output;
- 2. The BLM will adjust the acreage of required habitat restoration treatments to account for the potential failure to achieve improved raptor habitat outcomes.

All compensatory mitigation measures will be managed adaptively to achieve their required outcomes, based on required monitoring and reporting.

Finally, any time lag between the onset of impacts from the Project and the achievement of compensatory mitigation outcomes will also be accounted for by adjusting the acreage of habitat restoration treatments.

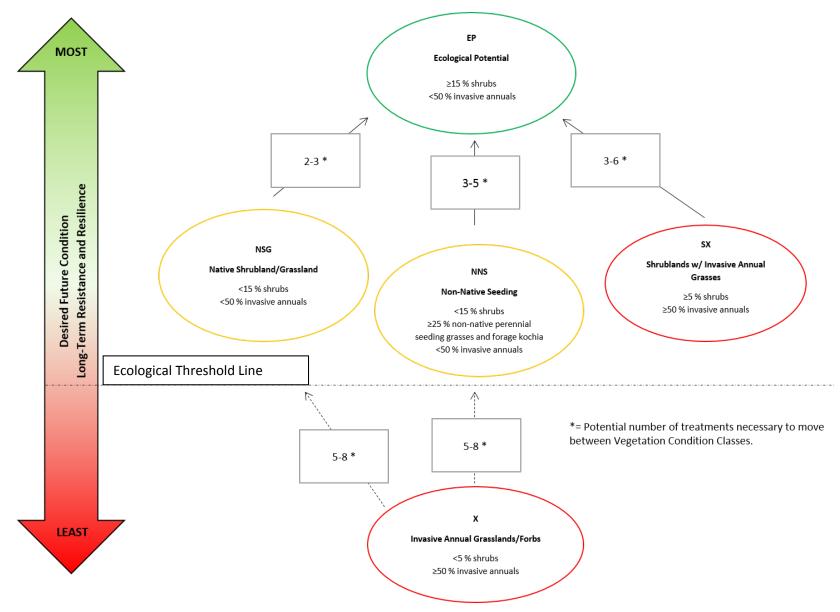


Figure E. Raptor habitat condition classes: Pathways and estimated number of required restoration treatments

4 LITERATURE CITED

BLM (Bureau of Land Management). 2008. Snake River Birds of Prey National Conservation Area Resource Management Plan and Record of Decision. September 2008. Bureau of Land Management, Boise District Office, Idaho.

Acronyms and Abbreviations

DFC desired future condition EP ecological potential

ESD ecological site description IM Instruction Memorandum

MA management area

MEP Mitigation and Enhancement Portfolio

NNS non-native seeding [vegetation condition class]

NSG early-seral native shrubland/grassland [vegetation condition class]

RMP resource management plan

ROW right of way

SRBOP Morley Nelson Snake River Birds of Prey National Conservation

Area

SX shrublands/invasive annual grasses [vegetation condition class]
X invasive annual grassland/forbs [vegetation condition class]